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PATENT SPECIFICATION

Application Date: May 21, 1942. No. 6906/42. **572,926**

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PROVISIONAL SPECIFICATION

Improvements in or relating to Automatic Firearms

We, THE BIRMINGHAM SMALL ARMS COMPANY LIMITED, a company incorporated under the laws of Great Britain, of Armoury Road, Small Heath, Birmingham, HENRY ALEXANDER FAULKNER and ROGER DAVID WACKROW, both British subjects, of the said Company's address, do hereby declare the nature of this invention to be as follows:—

This invention relates to automatic firearms and refers more particularly to detachable elements or parts thereof such for example as the barrel or stock, which are usually secured in position on the gun by mens of a fixing pin which normally takes the form of a screw threaded pin or bolt. The chief object of the present invention is to provide an improved construction and arrangement of fixing pin which does not require to be screwed and unscrewed, is easily and rapidly inserted and removed, and has no tendency to become loose during the firing of the gun.

According to the present invention a fixing pin is characterised by a cylindrical body portion having formed in the periphery thereof an annular groove or like recess arranged to be elastically engaged by a suitably shaped retaining spring, the part thereof which engages with the said groove or recess being adapted to lie in a plane tangential to and in contact with the periphery of the said body portion when the spring is in its fixed position.

The cylindrical body portion of the fixing pin is of a diameter which corresponds to the size of the hole into which it is to be inserted, as in the case of a screwed pin. One end of the pin has formed on or attached thereto an enlarged knob portion forming a convenient means of finger grip, while close to the other end thereof is formed an annular groove or recess, the size of which corresponds to the diameter of the wire constituting the retaining spring. The aforesaid annular groove or recess produces a nose portion at the end of the pin against which the retaining spring abuts, and the depth of the said annular groove is slightly more than the diameter of the spring, whereby the seating of the spring during its engagement in the annular groove securely holds the retaining pin but which pin, however, can be withdrawn by a sharp pull, the action of which causes the aforesaid nose portion to open the spring out of the annular groove and so release the pin. Only a straight portion of the spring is adapted to engage at any point on the periphery of the aforesaid annular groove, and such portion of the spring is so arranged as to lie in a plane tangential to the said annular groove.

The shape or contour of the retaining spring depends on the circumstances of its location and the particular component to which it is to be attached. If for example a fixing pin in accordance with this invention is applied to a gun barrel, the retaining spring can conveniently be attached to a bush fixed to the body of the gun. In this case the spring is **D**-shaped and fits into a similarly shaped annular recess formed on the outside of the bush, so that the straight portion of the spring lies partially within and tangential to the hole in the body through which the fixing pin passes to an extent slightly more than its diameter.

In the application of the invention to a stock fixing pin, where the retaining spring is mounted in the top plate or body of the gun, such spring is preferably **U**-shaped with one side thereof inturned to an angle of about fifteen degrees. This inturned portion of the spring is inserted in a similarly inclined hole formed in the top plate or body adjacent to the hole through which the retaining pin passes, which secures the spring to the top plate or body in a simple manner and also positions that portion of the spring relative to the said hole as previously described.

Dated this 20th day of May, 1942.
ERNEST W. JONES,
Agent for the Applicants.

[*Price* 1/-]